Math Interventions Update

A Monthly Update for the Latest in Math Interventions

March 2013
Volume 1 – Issue 4

MAF Grant Winter Survey Highlights

Again, I would like to thank everyone who completed the survey. I know that you are very busy and truly appreciate your time. Here are some highlights from the survey:

- ✓ During the first semester, **3,242 students** received **direct math interventions** by MITs funded by the MAF Grant – that's an **average of 31 students per teacher**
- ✓ The teaching experience of MITs range from just **one year to forty-three years**
- ✓ On average, MITS have **17 years** of teaching **experience**
- ✓ On average, MITs have **4 years of experience** serving **as** the **MAF Intervention Teacher**
- ✓ MITs have attended **32 different math professional developments** already this year
- ✓ MITs plan to attend **21 different math professional developments** before the end of the year
- ✓ Teachers are using multiple assessments when selecting students for math interventions. **28 different assessments** are used **for selecting students**. The top 5: MAP - 61.3%, AVMR – 30.1%, Discovery Education – 30.1%, SNAP – 18.3%, AIMSWeb 17.2%
- ✓ MITs are using **24 different assessments to progress monitor**
- ✓ **92.2%** of MITS are using **AVMR Assessments with other assessments** to progress monitor and guide daily instruction
- ✓ **61.2%** of MITs began delivering intervention services **within 3 weeks** of starting the school year
- ✓ **84%** of MITs are currently using **Math Recovery** or components of Math Recovery as their intervention program
- ✓ MITs provide interventions to a variety of groups – **88.3%** work with groups of **4-5 students**, **51.5%** work **one-on-one** with students, **42.7%** have groups of **2-3 students**, and **33%** reported groups sizes of **6 or more students**

Please check out some quotes on collaboration from your colleagues, as well as some charts from the survey at the end of this month's newsletter.

Department of Education
Office of Next-Generation Learners
Division of Learning Services
Differentiated Learning Branch
Division Director: Johnny Collett
Branch Manager: April Pieper
Mathematics Intervention Consultant: Pamela Pickens

Mathematics Achievement Fund (MAF)

Monthly Update/Focus

Grant Requirements – Please review the Mathematics Achievement Fund handbook to make sure that your school is adhering to the requirements of the grant. I have had several questions about how additional funds may be spent. I have also had questions and concerns about the students receiving services. If you are ever unsure of the requirements, please feel free to email me or call me at any time.

Remember these Options for Implementation (2012-2013)

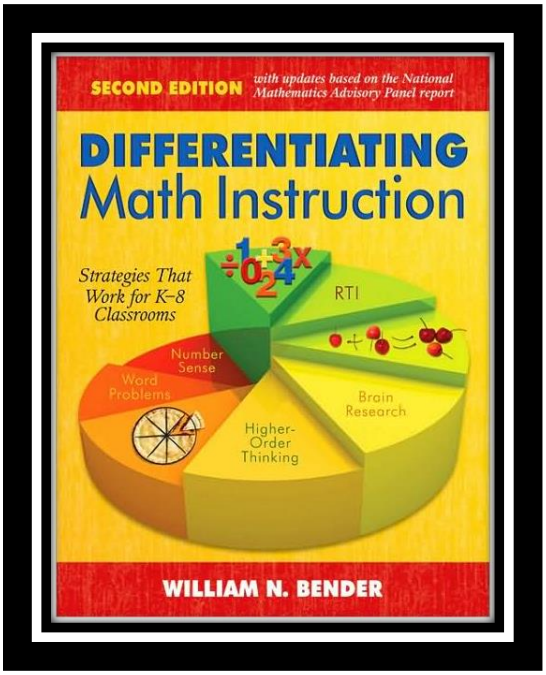
Funded schools many choose one of the following implementation models for the 2012-2013 school year:

1. Full-time MAF-funded intervention teacher (e.g., a 1.0 or two 0.5 certified individuals)
2. Half-time MAF-funded intervention teacher

Since the MAF grant stipulates a minimum of half-time MAF devoted to direct pull-out of intervention students, the other half of the intervention teacher's time is flexible for collaborative work with other primary grade teachers. In the event the second option above is selected, schools will need to ensure that the intervention needs of students are met before any collaborative work with other primary grade teachers is considered.

Students that receive intervention services from the MIT (whose salary is paid through the Math Achievement Grant fund) must:

- be in the primary program and identified as at-risk in mathematics
- receive intervention services based on a school determined proc3ess for recommending and assessing student eligibility
- be assessed for purposes of identification with grant funded assessments



Recommended Reading

Differentiating Math Instruction: Strategies That Work for K-8 Classrooms

by William N. Bender (March 17, 2009)

With recommendations based on the 2008 National Mathematics Advisory Panel report, this updated resource provides classroom-ready strategies for differentiating math instruction.

Mathematical Practice of the Month

To emphasize the Mathematical Practices, the CCSS gives them their own distinct section, but they are not to be thought of as a separate skill set to be handled in special lessons or supplements. The intent is that these *essential mathematical habits of mind and action* pervade the curriculum and pedagogy of mathematics, K–12, in age-appropriate ways.

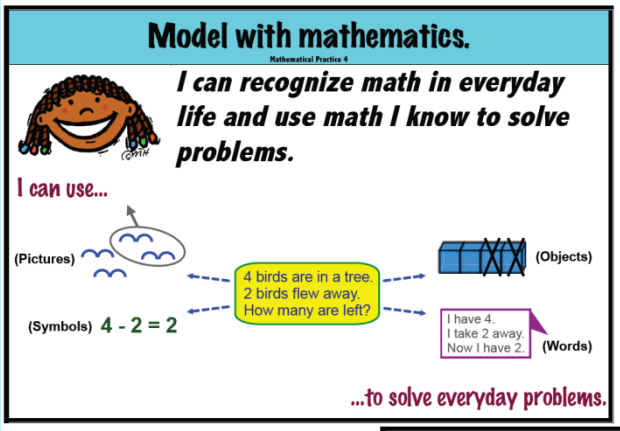
4 – Model with Mathematics

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Resource: Common Core State Standards Initiative http://www.corestandards.org

Anchor Charts for this Mathematical Practice

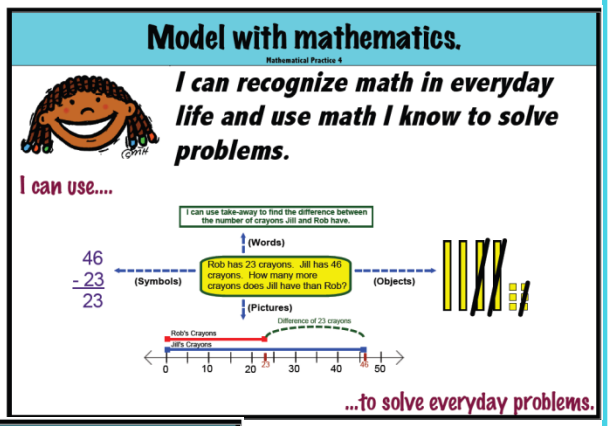
Resource: Jordan School District http://elemmath.jordandistrict.org/files/2012/05/Standard-41.pdf

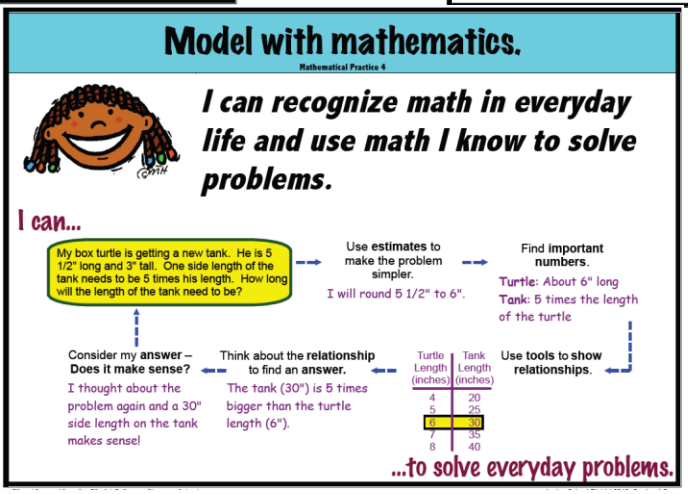


Left – K-1

Right – 2-3

Bottom – 4-5





Spotlight on CIITS

What is CIITS?

CIITS stands for the Continuous Instructional Improvement Technology System – a tool designed to pull standards, instructional materials, lesson plans, assessments, data and professional development all together into an integrated online resource. CIITS is a one-stop shop that provides Kentucky educators with the resources aligned to standards that support highly effective teaching and learning in their classrooms, schools and districts.

Featured Link this Month: PD 360°

PD 360° is a professional development tool that helps students reach college and career readiness. PD 360° provides that largest online library of differentiated training videos for educators. When you access PD 360°, you will have essential tools that provide more value than any other on-demand professional development resource. The 2,000+ videos and online professional learning community of nearly 1,000,000 verified educators make PD 360° the world's largest on-demand professional development resource for educators.

Benefits:

- On-demand access anytime, anywhere on a desktop or a mobile device
- Personalized professional learning with more than 2,000 videos and resources on 250 topics
- Peer collaboration in an educators-only community with almost 1,000,000 members
- Seamless integration with Observation 360, Common Core 360, and other tools

PD 360° School Improvement Network

UNBRIDLED LEARNING

Continuous Instructional Improvement Technology System

Dates to Remember

April 17th – 20th – NCTM Annual Meeting and Exposition, Denver, Colorado

November 6th – 8th – NCTM Regional Conference and Exposition

School-Wide Strategies for Managing Mathematics

Math Computation: Two Ideas to Jump-Start Active Academic Responding *(Skinner, Pappas & Davis, 2005)*. Research shows that when teachers use specific techniques to motivate their classes to engage in higher rates of active and accurate academic responding, student learning rates are likely to go up. Here are two ideas to accomplish increased academic responding on math tasks. First, break longer assignments into shorter assignments with performance feedback given after each shorter 'chunk' (e.g., break a 20-minute math computation worksheet task into 3 seven-minute assignments). Breaking longer assignments into briefer segments also allows the teacher to praise struggling students more frequently for work completion and effort, providing an additional 'natural' reinforcer. Second, allow students to respond to easier practice items orally rather than in written form to speed up the rate of correct responses.

Article Excerpt from *Intervention Central*. Read the entire the article at
http://www.interventioncentral.org/academic-interventions/math/school-wide-strategies-managing-mathematics

Wonderful Websites

- ***K-5 Math Teaching Resources*** - This site provides an extensive collection of free resources, math games, and hands-on math activities aligned with the Common Core State Standards for Mathematics. http://www.k-5mathteachingresources.com/

- ***Kentucky Department of Education – Mathematics – Elementary*** - The elementary mathematics page is organized using categories: Curriculum, Instructions, Assessment, Highlighted Supports and State/National agencies and organizations. Each link connects to additional information and resources including professional development opportunities, KDE-produced resources and professional organizations. http://education.ky.gov/curriculum/math/Pages/Mathematics---Elementary.aspx

- ***Math Interventions from Akron Public Schools*** - An extensive list of interventions and strategies by grade level. http://www.akronschools.com/departments/ci/pyramids/math-strategies/

Quotable Quotes from MITs

when asked to describe their role in collaboration with the intervention team.

I provide support, resources and strategies to primary teachers.

My role primarily consists of providing insight into the results of Add+Vantage Math assessments, using those results to determine a pool of students for intervention and analyzing the results to help teachers plan instruction and determine small groups.

The MAF intervention teacher collaborates with primary classroom teachers. Together, they analyze the data collected and monitor student progress. When students have become successful and it is agreed upon by all parties on the Intervention Team, then students are taken out of the program.

I provide workshops for faculty to share research-based resources and ideas.

I collaborate with teachers to provide resources for monitoring students.

As the MIT, I am a part of the RTI team. I monitor student progress in the RTI process by analyzing test scores and work with the team to decide what the student needs to be successful.

I help analyze data for the entire primary population and focus on exit criteria.

The MAF intervention teacher is the go to person for assessment data, monitoring student progress, scheduling for the instructional aide delivery of math instruction, math center-based activity suggestions and delivery, PD coordinator of common assessment development, formative assessment lessons, math curriculum mapping and math strategies.

I collaborate with teachers to provide strategies and interventions for use by the classroom teachers.

I worked with the RTI team members to develop our school wide RTI plan.

I also serve as the assessment coordinator for my building, so I manage student data, talk with teachers and help make decisions about student placement.

I co-teach with the primary classroom teachers.

Winter Survey Data Displays